

CPL590 Demo Software Manual

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Demo Software Installation

Minimum Requirements

Windows 7 or higher (64 bit)

8G memory

64G free disk space

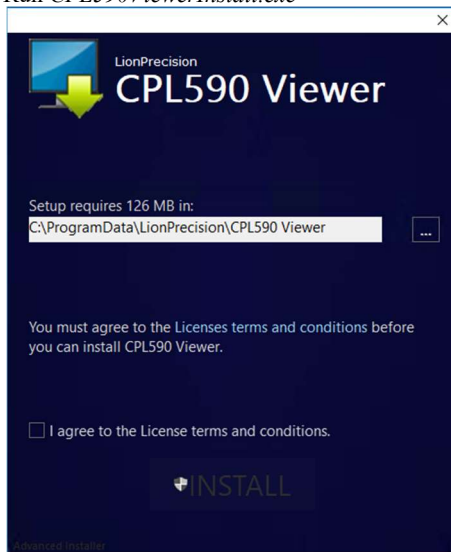
1 Available USB port (2.0 or higher); 1024 x 768 Minimum Screen Resolution

Installation Procedure

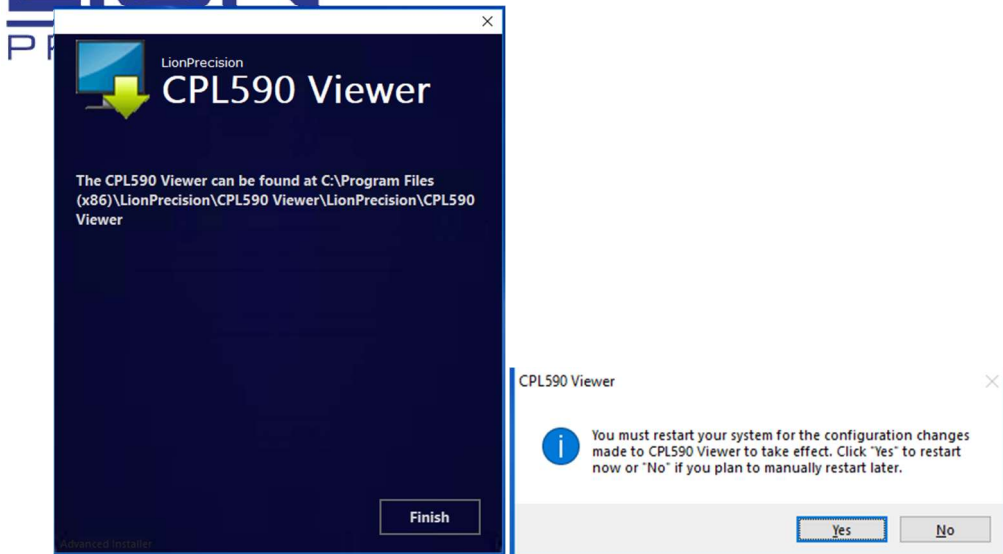
The CPL590 Demo Viewer program is installed in the `\Program Files (x86)\LionPrecision\CPL590 Viewer` directory on your hard disk. If you install the CPL590 Demo Viewer software a second time using the same subdirectory, the previous installation will automatically be uninstalled first.

To use the CPL590 Demo Viewer flash drive:

1. Insert the Lion Precision CPL590 Demo Viewer flash drive in available USB port.
2. View the contents of the flash drive.
3. Run `CPL590ViewerInstall.exe`



4. Select 'Install' on the CPL590 Demo Viewer Installer screen.
5. Follow the directions of the installation programs.
6. When the installation is done, restart the computer.



7. After restarting, run the program by selecting the icon on the desktop, or by selecting **Start > All Programs > CPL590 Demo Viewer > CPL590 Demo Viewer.exe**

Demo Software Basics

Operating Mode

When the CPL590 Demo Viewer is launched (**Start > CPL590 Demo Viewer**) it will display a Splash Screen and query the operator to begin to scan for CPL59X 1 Channel Devices on the USB Bus:



If the operator selects the 'Exit' button, the program will close.

If the operator selects the 'Scan' button, the program will find all CPL59X Devices on the USB bus and display the device(cabinet) assignment number, the name, and serial numbers of each Device/Driver found. If it does not find a CPL59X device, the operator will be given the option to 'Retry' the connection.

CPL590's Found:

Run	CabinetNumber	Name	SerialNumber
<input type="checkbox"/>	1	CPL592	19004874
<input type="checkbox"/>	2	CPL592	19004873

OK **Retry**

If the Device/Driver is to be run, the operator must enable the 'Run' flag by checking the box:

CPL590's Found:

Run	CabinetNumber	Name	SerialNumber
<input checked="" type="checkbox"/>	1	CPL592	19004874
<input checked="" type="checkbox"/>	2	CPL592	19004873

OK **Retry**

If the operator selects the 'OK' flag, the Home Screen will be displayed:



The program will automatically open a connection to the CPL59X device after the Scan Dialog is closed.

The Home screen will show the Oscilloscope display and the Serial number(s) of the Device/Driver(s) that were enabled to be 'Run' in the Scan screen.

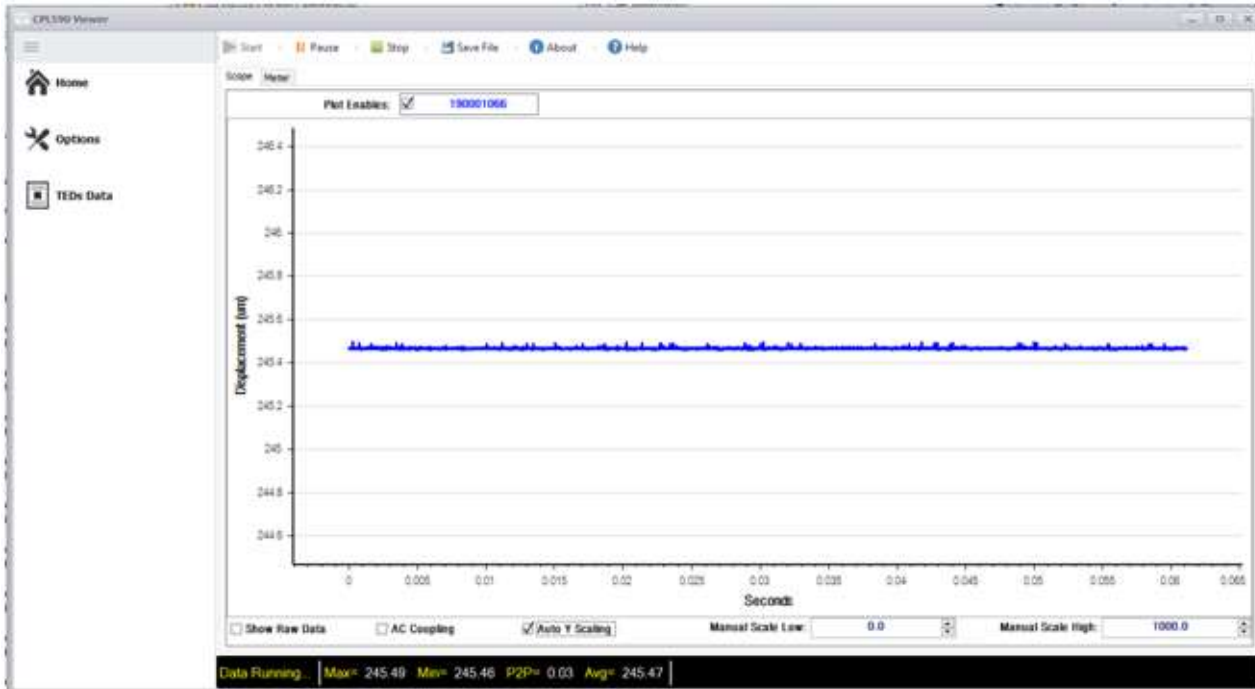
The top menu shows the possible commands (Start, Pause, Stop, Save File, About, Help).

The bottom toolbar indicates the state of communicating with the Devices (Not Connected, Connected, Data Running, Data Paused, Data Stopped). The bottom toolbar also shows the statistics (Min value, Max value, Peak-to-Peak value, and Average value) of the data buffer received from the first Device.

The 'Options', 'TEDs Data', and 'Zero/Gain Adjust' menu items, on the left toolbar, will be disabled until the Device(s) has been successfully connected.

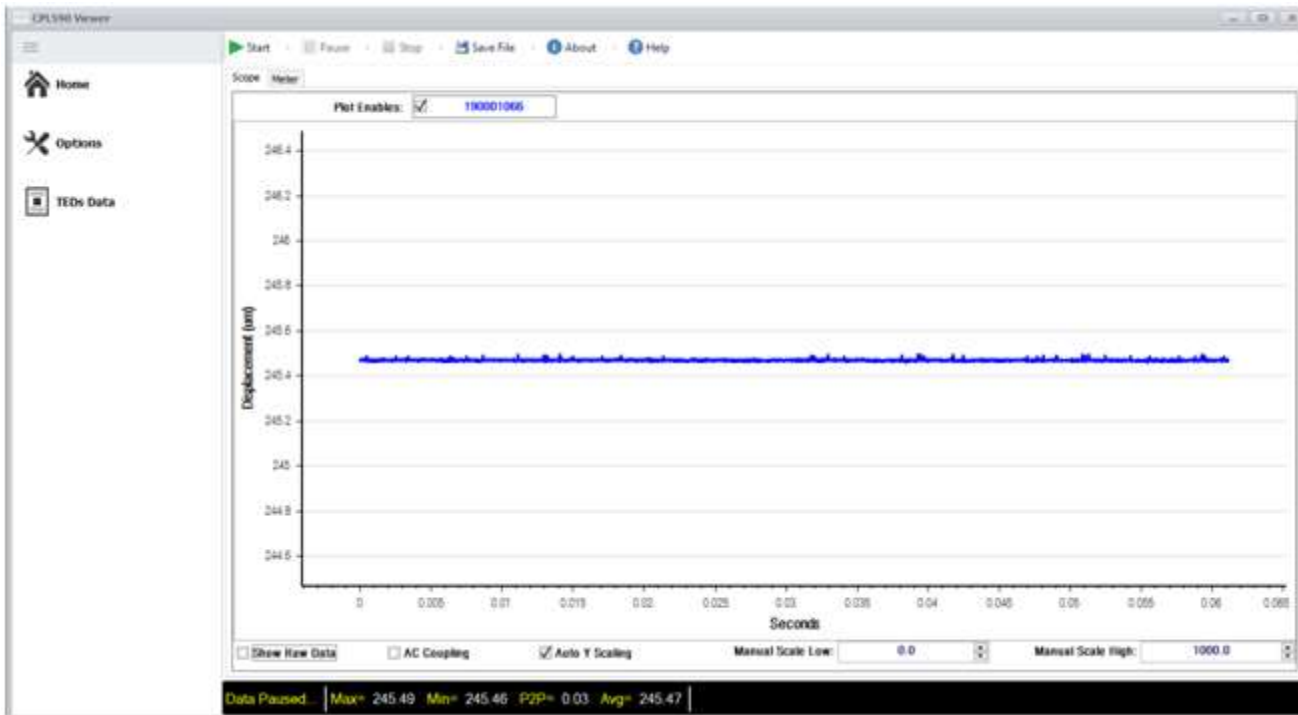
Start Data

The data transfer (receiving), from all Devices selected, will not happen until the operator selects the **'Start'** button. The data will be received and displayed on the Scope View Screen (if the **Plot Enable** is checked). Once data transfer begins, the **'Pause'**, **'Stop'** and **'Save File'** button will be enabled.



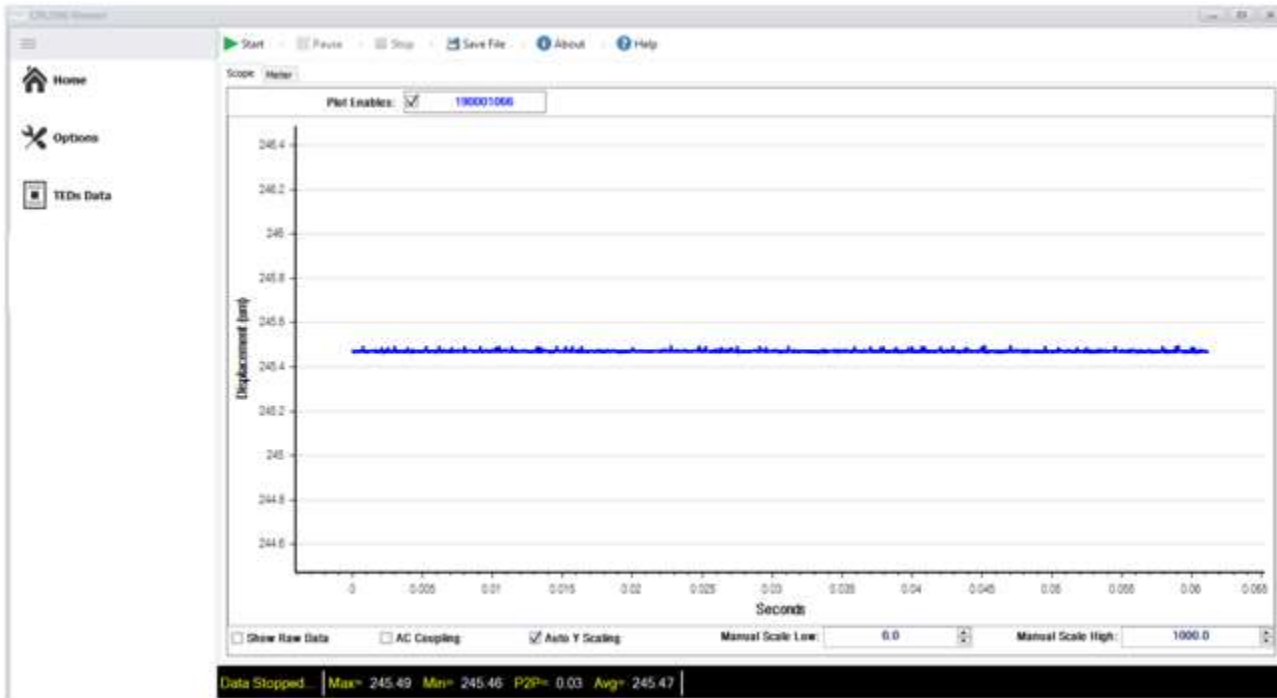
Pause Data

When the operator selects the 'Pause' button, the data shown on the Oscilloscope display will stop updating but the data will continue to be receiving from the Device.



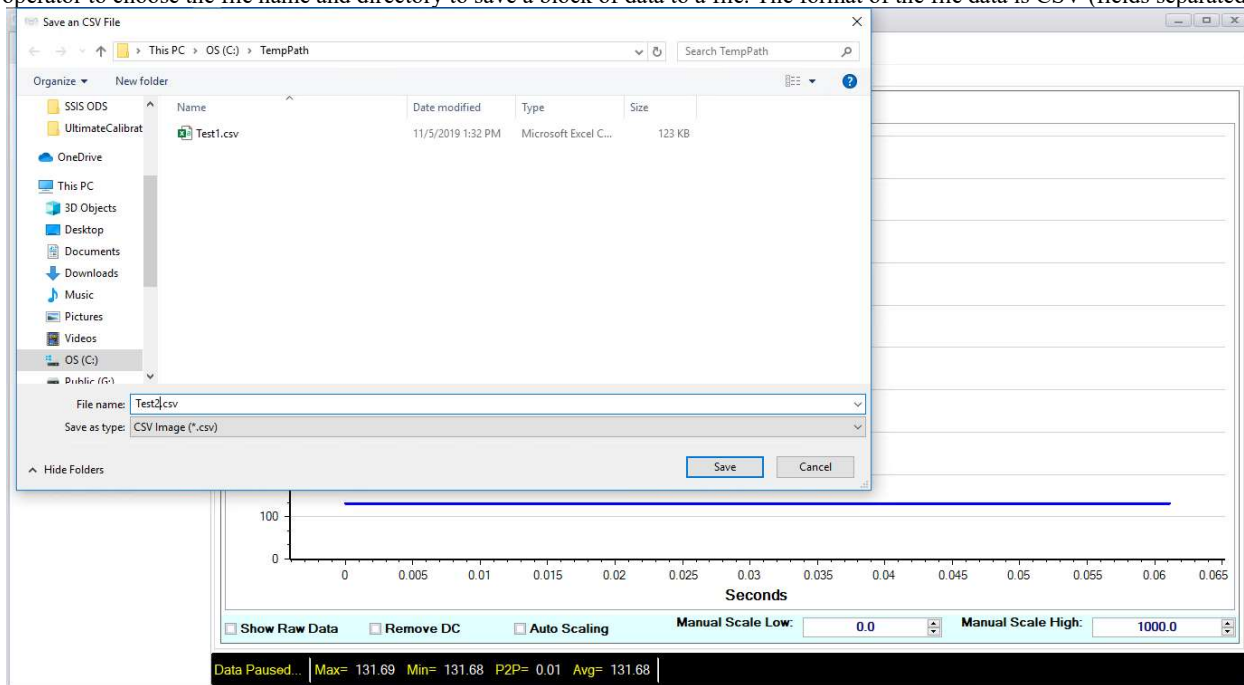
Stop Data

When the operator selects the 'Stop' button, the data transfer operation will be halted and the data shown on the Oscilloscope display will stop updating.



Save File

When the operator selects the 'Save File' button, the program will stop the data transfer operation and then display an Open file Dialog for the operator to choose the file name and directory to save a block of data to a file. The format of the file data is CSV (fields separated by a comma).

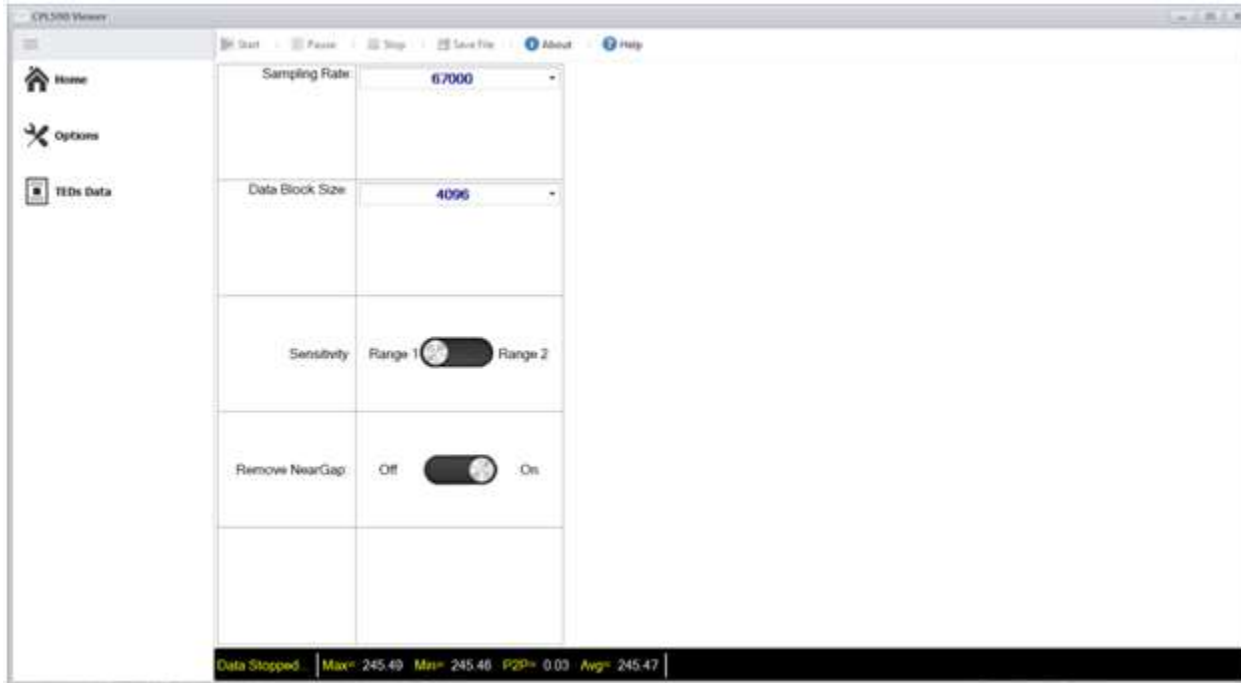


The data saved will be the data points from the Oscilloscope display. There will be a column for the Time stamp (in seconds), the Displacement (in micrometers), the Sample index, and the Raw Data count value. The header for the Displacement and Raw data is the serial number of the Device.

	A	B	C	D	E
1	Time	190001066		Sample	190001066
2	0	131.6396		0	34334
3	0.00001	131.6396		1	34334
4	0.00003	131.6396		2	34334
5	0.00004	131.6396		3	34334
6	0.00006	131.6396		4	34334
7	0.00007	131.6396		5	34334
8	0.00009	131.6439		6	34335
9	0.0001	131.6354		7	34333
10	0.00012	131.6396		8	34334
11	0.00013	131.6354		9	34333
12	0.00015	131.6396		10	34334
13	0.00016	131.6396		11	34334
14	0.00018	131.6396		12	34334
15	0.00019	131.6396		13	34334
16	0.00021	131.6396		14	34334
17	0.00022	131.6396		15	34334
18	0.00024	131.6396		16	34334
19	0.00025	131.6396		17	34334
20	0.00027	131.6396		18	34334

Options

When the operator selects the '**Options**' menu item, the program will halt the data transfer and display the **Options** dialog:



These options will not be activated until the operator selects the '**Home**' menu item. Once this happens, the data transfer will resume with the new options.

Sampling Rate

Choose from a drop down list of possible rates at which the CPL59X Driver will sample the data from the probe each second. The possible choices are 500, 1000, 10000, 15000, and 67000.

Data Block Size

Choose from a drop down list of possible data transfer block sizes (in 16 bit words). The possible choices are 4096, 8192, 16384, 32768, and 65536.

Sensitivity

This allows the operator to select which Sensitivity (Probe Range) that the Driver will use when taking measurements. The two ranges are programmed into the Driver at Calibration stage.

Remove NearGap

This setting will determine if the program will subtract the Near Gap value from each calculated displacement value from the data buffer.

TEDs Data

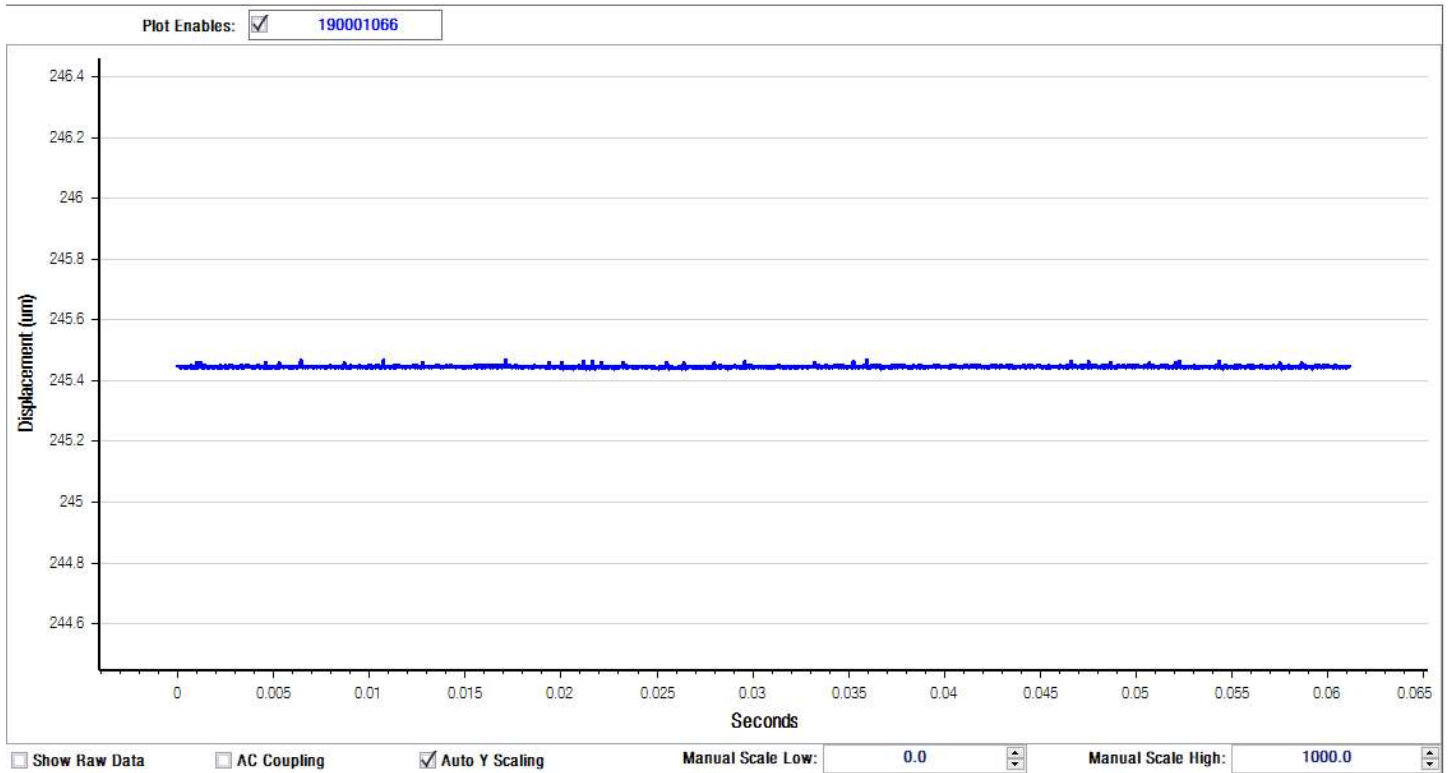
When the operator selects the 'TEDs Data' menu item, the program will retrieve the Configuration (TEDs) information from the Driver and display it in the 'TEDs Data' dialog:



Data Display Screens

Scope

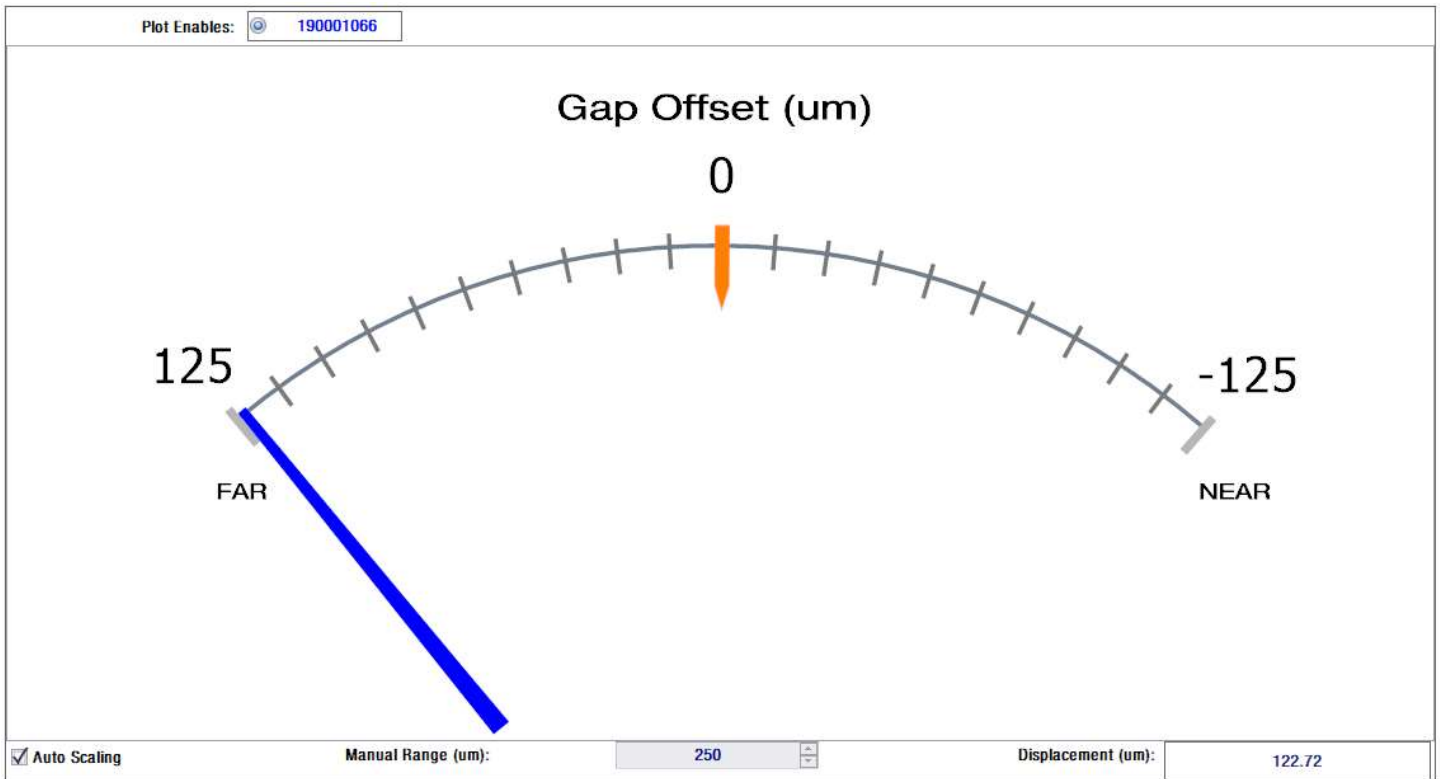
When the operator clicks the 'Scope' Tab near the top of the Main screen, the Oscilloscope View is displayed. This view will show the Plot Enables checkbox for each CPL59X Driver enabled to Run (in the Scan dialog). Each CPL59X Driver graph plot will have its own color.



This view also has options to Display Raw Data, enable AC Coupling, perform Auto Scale of the Displacement (Y) Axis, and to set the Displacement Axis scale range (if Auto Scale is unchecked).

Meter

When the operator clicks the 'Meter' Tab near the top of the Main screen, the Probe position Gauge is displayed. This view will show the Plot Enables checkbox for each CPL59X Driver enabled to Run (in the Scan dialog). Each CPL59X Driver gauge needle will have its own color.



This view also has options to Perform Auto Scale and to set the Manual Axis scale range (if Auto Scale is unchecked).